equivalent, meeting the requirements of Underwriters Laboratory (UL) Standard 1076, Proprietary Burglar Alarm Units and Systems (February 1, 1999), level AA, to protect against unlawful entry after hours and to monitor designated interior storage spaces. This intrusion alarm system must be monitored in accordance with UL Standard 611, Central-Station Burglar-Alarm Systems (February 22, 1996).

(k) The facility must comply with the requirements for a Level III facility as defined in the Department of Justice, U. S. Marshals Service report ''Vulnerability Assessment of Federal Facilities'' dated June 28, 1995. These requirements are provided in Appendix A to this Part 1228. Agencies may require compliance with Level IV or Level V facility security requirements if the facility is classified at the higher level.

(l) Records contaminated by hazardous materials, such as radioactive isotopes or toxins, infiltrated by insects, or exhibiting active mold growth must be stored in separate areas having separate air handling systems from other records.

(m) To eliminate damage to records and/or loss of information due to insects, rodents, mold and other pests that are attracted to organic materials under specific environmental conditions, the facility must have an Integrated Pest Management program as defined in the Food Protection Act of 1996 (Section 303, Public Law 104–170, 110 Stat. 1512). This states in part that Integrated Pest Management is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. The IPM program emphasizes three fundamental elements:

(1) *Prevention.* IPM is a preventive maintenance process that seeks to identify and eliminate potential pest access, shelter, and nourishment. It also continually monitors for pests themselves, so that small infestations do not become large ones;

(2) *Least-toxic methods.* IPM aims to minimize both pesticide use and risk through alternate control techniques and by favoring compounds, formulations, and application methods that present the lowest potential hazard to humans and the environment; and

(3) *Systems approach.* The IPM pest control contract must be effectively coordinated with all other relevant programs that operate in and around a building, including plans and procedures involving design and construction, repairs and alterations, cleaning, waste management, food service, and other activities.

(n) For new records storage facilities only, the additional requirements in this paragraph (n) must be met:

(1) Do not install mechanical equipment containing motors rated in excess of 1 HP within records storage areas (either floor mounted or suspended from roof support structures).

(2) Do not install high-voltage electrical distribution equipment (i.e., 13.2kv or higher switchgear and transformers) within records storage areas (either floor mounted or suspended from roof support structures).

(3) A redundant source of primary electric service such as a second primary service feeder should be provided to ensure continuous, dependable service to the facility especially to the HVAC systems, fire alarm and fire protection systems. Manual switching between sources of service is acceptable.

(4) The facility must be kept under positive air pressure especially in the area of the loading dock. In addition, to prevent fumes from vehicle exhausts from entering the facility, air intake louvers must not be located in the area of the loading dock, adjacent to parking areas or in any location where a vehicle engine may be running for any period of time. Loading docks must have an air supply and exhaust system that is separate from the remainder of the facility.

[64 FR 67642, Dec. 2, 1999; 64 FR 68946, Dec. 9, 1999]

§ 1228.230 What are the fire safety requirements that apply to records storage facilities?

(a) The fire detection and protection systems must be designed or certified by a licensed fire protection engineer.

(b) All walls separating records storage areas from each other and from other storage areas in the building

must be 4-hour fire resistant. The records storage areas must not exceed a total capacity of 250,000 cubic feet of records each and must be constructed to prevent migration of fire and smoke to other spaces of the building. If the facility does not have fire compartmentalization of its records storage area or has compartmentalized records storage areas larger than 250,000 cubic feet, the facility may not store more than 250,000 cubic feet total of Federal records in the records storage area.

(c) Fire barrier walls that meet the following specifications must be provided:

(1) For existing records storage facilities, at least one-hour-rated fire barrier walls must be provided between the records storage areas and other auxiliary spaces.

(2) For new records storage facilities, two-hour-rated fire barrier walls must be provided between the records storage areas and other auxiliary spaces. One exterior wall of each stack area must be designed with a maximum fire resistive rating of one hour, or, if rated more than one hour, there must be at least one knock-out panel in one exterior wall of each stack area.

(d) Penetrations in the walls must not reduce the specified fire resistance ratings. The fire resistance ratings of structural elements and construction assemblies must be in accordance with American Society of Testing and Materials E 119–98, Standard Test Methods for Fire Tests of Building Construction and Materials.

(e) The fire resistive rating of the roof must be a minimum of ½ hour for all records storage facilities. For new records storage facilities, the fire resistive rating of the roof must also be a maximum of 1 hour.

(f) Openings in fire barrier walls separating records storage areas must be avoided to the greatest extent possible. If openings are necessary, they must be protected by self-closing or automatic Class A fire doors, or equivalent doors that maintain the same rating as the wall.

(g) Roof support structures that cross or penetrate fire barrier walls must be cut and supported independently on each side of the fire barrier wall.

(h) If fire barrier walls are erected with expansion joints, the joints must be protected to their full height.

(i) For new records storage facilities, building columns in the records storage areas must be 4-hour fire resistant from the floor to slab above or to the location where they connect to the roof framing system. For existing records storage facilities, the building columns must be at least 2-hour fire resistant.

(j) Automatic roof vents for routine ventilation purposes must not be designed into new records storage facilities. Automatic roof vents, designed solely to vent in the case of a fire, with a temperature rating at least twice that of the sprinkler heads are acceptable.

(k) Where lightweight steel roof or floor supporting members (e.g., bar joists having top chords with angles 2 by 1½ inches or smaller, ¼-inch thick or smaller, and 13/16-inch or smaller web diameters) are present, they must be protected either by applying a 10-minute fire resistive coating to the top chords of the joists, or by retrofitting the sprinkler system with large drop sprinkler heads. If a fire resistive coating is applied, it must be a product that will not release (off gas) harmful fumes into the facility. If fire resistive coating is subject to air erosion or flaking, it must be fully enclosed in a drywall containment constructed of metal studs with fire retardant drywall. Retrofitting may require modifications to the piping system to ensure that adequate water capacity and pressure are provided in the areas to be protected with these large drop sprinkler heads.

(l) No open flame (oil or gas) unit heaters or equipment may be installed or used in any records storage area.

(m) For existing records storage facilities, boiler rooms or rooms containing equipment operating with a fuel supply (such as generator rooms) must be separated from records storage areas by 2-hour-rated fire barrier walls with no openings directly from these rooms to the records storage areas. Such areas must be vented directly to the outside to a location where fumes will not be drawn back into the facility.

(n) For new records storage facilities, boiler rooms or rooms containing equipment operating with a fuel supply (such as generator rooms) must be separated from records storage areas by 4-hour-rated fire barrier walls with no openings directly from these rooms to the records storage areas. Such areas must be vented directly to the outside to a location where fumes will not be drawn back into the facility.

(o) For new records storage facilities, fuel supply lines must not be installed in areas containing records and must be separated from such areas with 4-hour rated construction assemblies.

(p) Equipment rows running perpendicular to the wall must comply with NFPA 101 (1997), Life Safety Code, with respect to egress requirements.

(q) No oil-type electrical transformers, regardless of size, except thermally protected devices included in fluorescent light ballasts, may be installed in the records storage areas. All electrical wiring must be in metal conduit, except that armored cable may be used where flexible wiring connections to light fixtures are required. Battery charging areas for electric forklifts must be separated from records storage areas with at least a 2-hour rated fire barrier wall.

(r) Hazardous materials, including records on cellulose nitrate film, must not be stored in records storage areas. Nitrate motion picture film and nitrate sheet film may be stored in separate areas that meet the requirements of the appropriate NFPA standard, NFPA 40 (1997), Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film, or NFPA 42 (1997), Code for the Storage of Pyroxylin Plastic.

(s) All records storage and adjoining areas must be protected by a professionally-designed fire-safety detection and suppression system that is designed to limit the maximum anticipated loss in any single fire event to a maximum of 300 cubic feet of records destroyed by fire. Section 1228.242 specifies how to document compliance with this requirement.

§ 1228.232 What are the requirements for environmental controls for records storage facilities?

(a) *Paper-based temporary records.* Paper-based temporary records must be stored under environmental conditions that prevent the active growth of mold. Exposure to moisture through leaks or condensation, relative humidities in excess of 70%, extremes of heat combined with relative humidity in excess of 55%, and poor air circulation during periods of elevated heat and relative humidity are all factors that contribute to mold growth.

(b) *Nontextual temporary records.* Nontextual temporary records, including microforms and audiovisual and electronic records, must be stored in records storage space that will ensure their preservation for their full retention period. New records storage facilities that store nontextual temporary records must meet the requirements in this paragraph (b) January 3, 2000. Existing records storage facilities that store nontextual temporary records must meet the requirements in this paragraph (b) no later than October 1, 2009. At a minimum, nontextual temporary records must be stored in records storage space that meets the requirements for medium term storage set by the appropriate standard in this paragraph (b). In general, medium term conditions as defined by these standards are those that will ensure the preservation of the materials for at least 10 years with little information degradation or loss. Records may continue to be usable for longer than 10 years when stored under these conditions, but with an increasing risk of information loss or degradation with longer times. If temporary records require retention longer than 10 years, better storage conditions (cooler and drier) than those specified for medium term storage will be needed to maintain the usability of these records. The applicable standards are:

(1) ANSI/PIMA IT9.11–1998, Imaging Materials—Processed Safety Photographic Films—Storage;

(2) ANSI/NAPM IT9.23–1996, Imaging Materials—Polyester Base Magnetic Tape—Storage;